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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/611,692
Filing Date: July 01, 2003
Appellant(s): JACOBS ET AL.

MAILED
APR 27 2007
GROUP 2800

Jacobs et al.
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed December 26, 2006 appealing from the Office action mailed February 15, 2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

US 5,130,897	Kuzma	07-1992
US 5,568,367	Park	10-1996
US 4,349,705	Kuhfus	09-1982

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 12, 17, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Kuzma (U.S. Patent 5130897).
2. With regards to Claim 12, Kuzma discloses an electronic device including:
 - A housing [Figure 1: (10)];
 - A circuit board [Figure 1: (60)] having at least one surface mounted light emitting diode [Figure 4: (400); Column 3, Lines 53-54];
 - A keypad [Figure 1: (30, 40, 50)] having a base [Figure 1: (40)] positioned on a top surface of the circuit board, whereby the base has a plurality of buttons [Figure 1: (310)] extending away from the circuit board, and at least one slot [Figure 1] corresponding to the at least one surface mounted light emitting diode; and
 - A light pipe [Figure 1: (20)] having openings [Figure 1: (210)] corresponding to the buttons of the keypad, whereby the light pipe is positioned on the keypad such that buttons extend through the openings therein so that light is dispersed through the light pipe to the buttons.
3. With regards to Claim 17, Kuzma discloses the light emitting diodes being arranged along a longitudinal axis of the circuit board [Figure 1].

4. With regards to Claim 20, Kuzma discloses the light pipe having at least one light dispersing slot [Figure 2: (230)] corresponding to the at least one surface mounted light emitting diode.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-4 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuzma (U.S. Patent 5130897) in view of Park (U.S. Patent 5568367).

6. With regards to Claim 1, Kuzma discloses an electronic device with back lighting including:

- A housing with a top cover [Figure 1: (10)] having a plurality of apertures [Figure 1: (110)];
- A circuit board [Figure 1: (60)] having a light emitting diode [Figures 1, 4: (400); Column 3, Lines 53-54];
- A keypad [Figure 1: (30, 40)] having a base [Figure 1: (40)] with a plurality of buttons [Figure 1: (310)] extending through the apertures of the top cover; and
- A light pipe [Figure 1: (20)] positioned on a top surface of the keypad between the top cover of the housing and the keypad so that light is dispersed through the light pipe to the buttons.

Kuzma does not specifically teach the housing further including a bottom cover.

Park teaches a remote control device including an aesthetically pleasing housing with top and bottom covers [Figures 3-4: (10, 14)] incorporating multiple electrical and optical components therein.

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the electronic device of Kuzma to incorporate the housing with top and bottom covers of Park, so as to ensure protection for the various inside components and improve aesthetics.

7. With regards to Claim 2, Kuzma in view of Park discloses the claimed invention as cited above. In addition, Kuzma teaches the keypad [Figure 1: (40)] having at least one slot corresponding to the light emitting diode.

8. With regards to Claim 3, Kuzma in view of Park discloses the claimed invention as cited above. In addition, Kuzma teaches the light emitting diode being surface mounted to the circuit board [Figure 1; Column 3, Lines 53-54].

9. With regards to Claim 4, Kuzma in view of Park discloses the claimed invention as cited above. In addition, Kuzma teaches the light pipe [Figure 2: (20)] having openings [Figure 2: (210)] corresponding to the buttons of the keypad for receiving the buttons therein.

10. With regards to Claim 9, Kuzma in view of Park discloses the claimed invention as cited above. In addition, Kuzma teaches the light pipe having at least one light dispersing slot [Figure 2: (230)] corresponding to the at least one surface mounted light emitting diode.

11. With regards to Claim 10, Kuzma in view of Park discloses the claimed invention as cited above. In addition, Kuzma teaches the buttons including contacts that correspond to conductive contacts [Figure 1: (510)] such that when the buttons are pushed toward the circuit board, the contacts contact the conductive contacts to make an electrical connection, but does not specifically teach the conductive contacts being on the circuit board.

Park teaches a circuit board including in combination light emitting diodes [Figure 4: (21) and conductive contacts [Figure 4: (32)] corresponding to buttons on a keypad [Figure 4: (40)].

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the electronic device of Kuzma to incorporate the circuit board combination with LEDs and conductive contacts, as taught by Park, so as to provide a more robust device via a single unitary structure providing support for said LEDs and contacts, and thus, simplifying manufacturing.

12. With regards to Claim 11, Kuzma in view of Park discloses the claimed invention as cited above, but does not specifically teach the light pipe being the same size as the keypad.

However, it would have been an obvious matter of design choice to incorporate the light pipe to be the same size as the keypad, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955). In this case, making the light pipe the same size as the keypad could provide a more compact device and simplify manufacturing via the components neatly overlapping one another.

13. Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuzma (U.S. Patent 5130897) in view of Park (U.S. Patent 5568367) as applied to Claim 1 above, and further in view of Kuhfus (U.S. Patent 4349705).

Kuzma in view of Park discloses the claimed invention as cited above, but does not specifically teach the top cover including dividers extending from an inside surface of the top cover toward the base of the keypad that are arranged to receive the buttons therebetween (re: Claim 5); said dividers contacting the light pipe (re: Claim 6); said dividers contacting the base of the keypad through cut-outs in the light pipe (re: Claim 7); nor teaches said dividers contacting the base of the keypad (re: Claim 8).

Kuhfus teaches, "Various ways of holding the assembly together can be used. As an example, protrusions (dividers) molded on the back or under surface of the bezel 30 (top cover) can be passed through holes in the other members and the protrusions molded over on the back or undersurface of the PCB 10 [Column 2, Lines 7-11; underlines added by examiner]." It is an obvious teaching that said protrusions/dividers of the bezel could contact the light pipe, the base of the keypad through cut-outs in the light pipe, and the base of the keypad.

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the electronic device of Kuzma in view of Park to incorporate the dividers of Kuhfus to facilitate a strong attachment/holding means for the assembly, as corroborated by Kuhfus.

14. Claims 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuzma (U.S. Patent 5130897) as applied to Claim 12 above, and further in view of Kuhfus (U.S. Patent 4349705).

Kuzma discloses the claimed invention as cited above. In addition, Kuzma teaches the housing including a top cover [Figure 1: (10)] having a plurality of apertures [Figure 1: (110)], but does not specifically teach the top cover including dividers extending from an inside surface of the top cover toward the base of the keypad that are arranged to receive the buttons therebetween (re: Claim 13); said dividers contacting the light pipe (re: Claim 14); said dividers contacting the base of the keypad through cut-outs in the light pipe (re: Claim 15); nor teaches said dividers contacting the keypad (re: Claim 16).

Kuhfus teaches, "Various ways of holding the assembly together can be used. As an example, protrusions (dividers) molded on the back or under surface of the bezel 30 (top cover) can be passed through holes in the other members and the protrusions molded over on the back or undersurface of the PCB 10 [Column 2, Lines 7-11; underlines added by examiner]." It

is an obvious teaching that said protrusions/dividers of the bezel could contact the light pipe, the base of the keypad through cut-outs in the light pipe, and the base of the keypad.

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the electronic device of Kuzma to incorporate the dividers of Kuhfus to facilitate a strong attachment/holding means for the assembly, as corroborated by Kuhfus.

15. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kuzma (U.S. Patent 5130897).

Kuzma discloses the claimed invention as cited above, but does not specifically teach the light pipe being the same size as the keypad. However, it would have been an obvious matter of design choice to incorporate the light pipe to be the same size as the keypad, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955). In this case, making the light pipe the same size as the keypad could provide a more compact device and simplify manufacturing via the components neatly overlapping one another.

16. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kuzma (U.S. Patent 5130897) as applied to Claim 12 above, and further in view of Park (U.S. Patent 5568367).

Kuzma discloses the claimed invention as cited above. In addition, Kuzma teaches the buttons including contacts that correspond to conductive contacts [Figure 1: (510)] such that when the buttons are pushed toward the circuit board, the contacts contact the conductive contacts to make an electrical connection, but does not specifically teach the conductive contacts being on the circuit board.

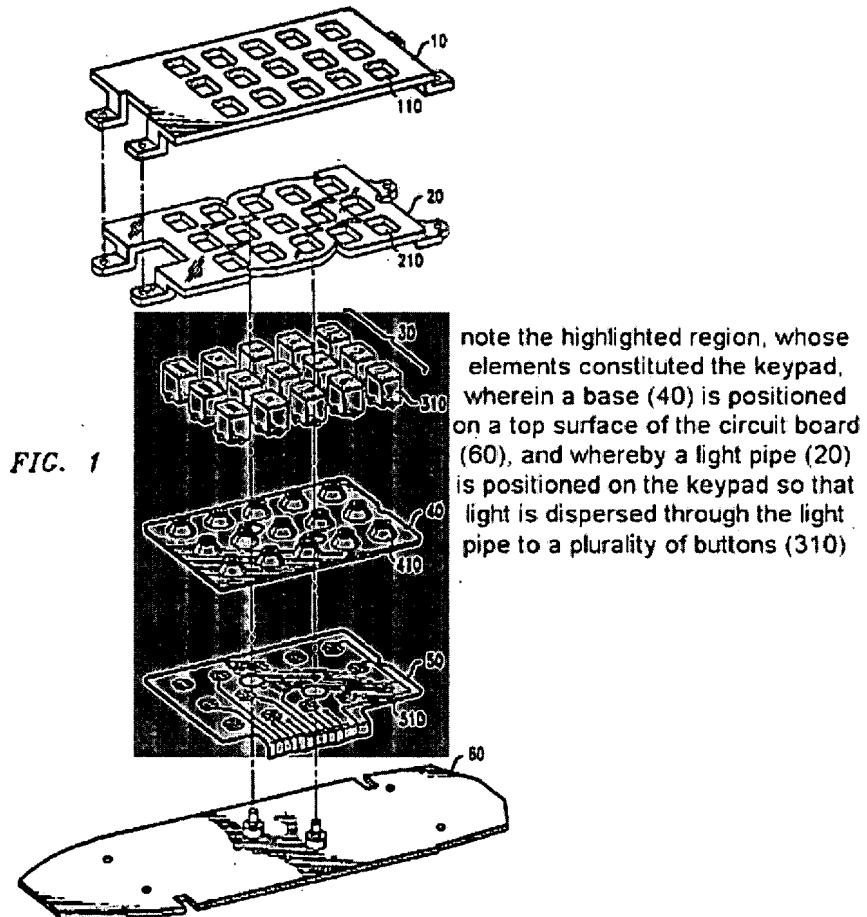
Park teaches a circuit board including in combination light emitting diodes [Figure 4: (21) and conductive contacts [Figure 4: (32)] corresponding to buttons on a keypad [Figure 4: (40)].

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the electronic device of Kuzma to incorporate the circuit board combination with LEDs and conductive contacts, as taught by Park, so as to provide a more robust device via a single unitary structure providing support for said LEDs and contacts, and thus, simplifying manufacturing.

(10) Response to Argument

1. Appellant's argument [Pages 7-8], concerning the rejection of Claims 12, 17, and 20 under 35 U.S.C. §102 (b) as being anticipated by Kuzma (U.S. Patent 5,130,897), is not persuasive.
2. The Examiner's rejection was based on the broadest interpretation of the claim language as stated by the Appellant, whereby insufficient context failed to clearly establish an electronic device remote control within the body of the claim as compared to a telephone dial as taught by Kuzma. The Appellant argues, "Kuzma does not describe or suggest a remote control... Rather, Kuzma teaches an illuminated telephone dial", however, "a remote control" is recited in the preamble and not within the structural limitations. It has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure and the portion of the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause [*Kropa v. Robie, 88 USPQ 478 (CCPA 1951)*]. Further, the illuminated telephone dial of Kuzma is a remote control in the sense that it controls device functions not within its housing but located elsewhere [e.g., via telephone jack].
3. With respect to the anticipation of all limitations, Kuzma clearly teaches every element listed by the Appellant and as construed by the Examiner (note drawing below).

The keypad of Kuzma was defined as the following elements [Figure 1: (30, 40, 50)] in combination, whereby said keypad has a base [Figure 1: (40)] that is positioned on a top surface of the circuit board [Figure 1: (60)] and the light pipe [Figure 1: (20)] being positioned on the keypad so that light is dispersed through the light pipe to the buttons [Figure 1: (310)].



4. Appellant's argument [Pages 8-10], concerning the rejection of Claims 1-4 and 9-11 under 35 U.S.C. §103(a) as being unpatentable over Kuzma (U.S. Patent 5,130,897) in view of Park (U.S. Patent 5,568,367), is not persuasive.
5. For reasons noted above, the prior art to Kuzma in view of Park remains commensurate to the scope of the claims as stated by the Appellant within the context of the body of the claim language and as broadly interpreted by the Examiner [MPEP 2111]. The Appellant argues,

"Kuzma does not describe or suggest a remote control... Rather, Kuzma teaches an illuminated telephone dial", however, "a remote control" is recited in the preamble and not within the structural limitations. It has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure and the portion of the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause [*Kropa v. Robie*, 88 USPQ 478 (CCPA 1951)]. Further, the illuminated telephone dial of Kuzma is a remote control in the sense that it controls device functions not within its housing but located elsewhere [e.g., via telephone jack].

6. In addition, in response to Appellant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In the rejection, Kuzma was relied upon as the primary reference, but lacked in teaching a housing including a bottom cover. Thus, the Examiner made the obvious combination to modify the housing of Kuzma to incorporate, solely, the principle teaching of the bottom cover of Park under the motivation to improve aesthetics and ensure protection for the various inside components.

7. Appellant's argument [Pages 11-14], concerning the rejection of Claims 5-8 under 35 U.S.C. §103(a) as being unpatentable over Kuzma (U.S. Patent 5,130,897) in view of Park (U.S. Patent 5,568,367) and further in view of Kuhfus (U.S. Patent 4,349,705), is not persuasive.

8. For reasons noted above, the prior art to Kuzma in view of Park and further in view of Kuhfus remains commensurate to the scope of the claims as stated by the Appellant within the context of the body of the claim language and as broadly interpreted by the Examiner [MPEP 2111]. The Appellant argues, similarly above, that Kuzma and Kuhfus are not remote controls but rather telephone dials, however, "a remote control" is recited in the preamble and not within

the structural limitations. It has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure and the portion of the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause [*Kropa v. Robie*, 88 USPQ 478 (CCPA 1951)]. Further, the illuminated telephone dials of Kuzma and Kuhfus are remote controls in the sense that they control device functions not within their housings but located elsewhere [e.g., via telephone jack].

9. In addition, in response to Appellant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In the rejection, the prior art to Kuzma in view of Park, which were previously combined, was relied upon as the primary reference, but lacked in teaching a top cover including dividers extending from an inside surface of the top cover toward the base of the keypad and are arranged to receive the buttons therebetween (re: Claim 5), whereby said dividers contact the light pipe (re: Claim 6) and contact the base of the keypad (re: Claim 8) through cut-outs in the light pipe (re: Claim 7). Thus, the Examiner made the obvious combination to modify the top cover of Kuzma in view of Park to solely incorporate the principle teaching of the top cover of Kuhfus, specifically the dividers extending from an inside surface of the top cover, under the motivation to facilitate strong attachment/holding means for the assembly, with said motivation being corroborated by Kuhfus [Column 2, Lines 7-11].

10. Appellant's argument [Pages 14-16], concerning the rejection of Claims 13-16 under 35 U.S.C. §103(a) as being unpatentable over Kuzma (U.S. Patent 5,130,897) in view of Kuhfus (U.S. Patent 4,349,705), is not persuasive.

11. For reasons noted above, the prior art to Kuzma in view of Kuhfus remains commensurate to the scope of the claims as stated by the Appellant within the context of the body of the claim language and as broadly interpreted by the Examiner [MPEP 2111]. The Appellant argues, similarly above, that Kuzma and Kuhfus are not remote controls but rather telephone dials, however, "a remote control" is recited in the preamble and not within the structural limitations. It has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure and the portion of the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause [*Kropa v. Robie*, 88 USPQ 478 (CCPA 1951)]. Further, the illuminated telephone dials of Kuzma and Kuhfus are remote controls in the sense that they control device functions not within their housings but located elsewhere [e.g., via telephone jack].

12. In addition, in response to Appellant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In the rejection, Kuzma was relied upon as the primary reference, but lacked in teaching a top cover including dividers extending from an inside surface of the top cover toward the base of the keypad and are arranged to receive the buttons therebetween (re: Claim 13), whereby said dividers contact the light pipe (re: Claim 14) and contact the base of the keypad (re: Claim 16) through cut-outs in the light pipe (re: Claim 15). Thus, the Examiner made the obvious combination to modify the top cover of Kuzma to solely incorporate the principle teaching of the top cover of Kuhfus, specifically the dividers extending from an inside surface of the top cover, under the motivation to facilitate strong attachment/holding means for the assembly, with said motivation being corroborated by Kuhfus [Column 2, Lines 7-11].

13. Appellant's argument [Pages 16-17], concerning the rejection of Claim 18 under 35 U.S.C. §103(a) as being unpatentable over Kuzma (U.S. Patent 5,130,897), is not persuasive.
14. For reasons noted above, the prior art to Kuzma remains commensurate to the scope of the claim as stated by the Appellant within the context of the body of the claim language and as broadly interpreted by the Examiner [MPEP 2111]. First, the Appellant argues, "Kuzma does not describe or suggest a remote control... Rather, Kuzma teaches an illuminated telephone dial", however, "a remote control" is recited in the preamble and not within the structural limitations. It has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure and the portion of the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause [*Kropa v. Robie, 88 USPQ 478 (CCPA 1951)*]. Further, the illuminated telephone dial of Kuzma is a remote control in the sense that it controls device functions not within its housing but located elsewhere [e.g., via telephone jack]. Second, Kuzma taught all features of the claim with the exception of the light pipe being the same size as the keypad. However, the Examiner maintains that it would have been obvious to one ordinarily skilled in the art at the time of invention to incorporate the light pipe to be the same size as the keypad, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art [*In re Rose, 105 USPQ 237 (CCPA 1955)*]. In this case, making the light pipe of Kuzma to be the same size as the keypad would provide for a more compact device and simplify manufacturing via the components neatly overlapping one another.
15. Appellant's argument [Pages 18-20], concerning the rejection of Claim 19 under 35 U.S.C. §103(a) as being unpatentable over Kuzma (U.S. Patent 5,130,897) in view of Park (U.S. Patent 5,568,367), is not persuasive.

16. For reasons noted above, the prior art to Kuzma in view of Park remains commensurate to the scope of the claim as stated by the Appellant within the context of the body of the claim language and as broadly interpreted by the Examiner [MPEP 2111]. The Appellant argues, "Kuzma does not describe or suggest a remote control... Rather, Kuzma teaches an illuminated telephone dial", however, "a remote control" is recited in the preamble and not within the structural limitations. It has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure and the portion of the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause [*Kropa v. Robie*, 88 USPQ 478 (CCPA 1951)]. Further, the illuminated telephone dial of Kuzma is a remote control in the sense that it controls device functions not within its housing but located elsewhere [e.g., via telephone jack].

17. In addition, in response to Appellant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In the rejection, Kuzma was relied upon as the primary reference, which additionally taught the buttons including contacts that correspond to conductive contacts [Figure 1: (510)], such that when the buttons are pushed toward the circuit board, the contacts contact the conductive contacts to make an electrical connection. Since Kuzma did not specifically teach said contacts being on the circuit board, the Examiner made the obvious combination to modify the electronic device of Kuzma to incorporate, solely, the circuit board combination with LEDs and conductive contacts of Park, under the motivation to provide a more robust device via a single unitary structure for providing support for the LEDs and contacts, which would thus simplify manufacturing.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Jason M. Han
April 23, 2007

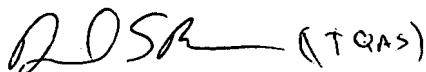
Conferees:

S.P.E. Sandra O'Shea



Sandra O'Shea
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DOB (TQAS)